"Multiscale Methods and Stability in Some High-Frequency Helmholtz-Type Problems"

In this talk, we will discuss issues in the computation of high-frequency Helmholtz-type problems. In particular, we discuss the issue of pollution effects and how certain multiscale LOD sub-grid correction methods can eliminate the effect in certain resolution regimes. This will help to motivate the issue of frequency dependent stability in continuous problems. We then present a few of the current results on frequency explicit a-priori bounds for heterogenous acoustic and elastic media.